High Resolution / Day & Night

COLOR DOME TYPE CAMERA

MANUAL

680 TVL

960H, UTC, Defog

INFORMATION - This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING - Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION : To prevent electric shock and risk of fire hazards:
Do NOT use power sources other than that specified.
Do NOT expose this appliance to rain or moisture.

This installation should be made by a qualified service person and should conform to all local codes

■ Warning

The camera needs periodic inspection.
Contact an authorized technician for inspection.

Stop using your camera when you find a malfunction.
If you use your camera around smoke or unusual heat for a long time, fire may be caused.

Do not Install the camera on a surface that can not support it.
Unless the surface is suitable, it could cause falling or other hazards.

Do not hold plug with wet hands.
It could cause an electric shock.

Do not disassemble the camera.
It may result in fire, electric shock or other hazards.

Do not use the camera close to a gas or oil leak.
It may result in fire or other hazards.

■ Precautions

Do not install the camera in extreme temperature conditions.

Only use the camera under conditions where temperatures are between -10°C and +50°C. Be especially careful to provide ventilation when operating under high temperatures.

Do not install or use the camera in an environment where the humidity is high.

It can cause the image quality to be poor.

Do not install the camera under unstable lighting conditions.

Severe lighting change or flicker can cause the camera to work improperly.

Do not touch the front lens of the camera.

It is one of the most important parts of the camera. Be careful not to be stained by fingerprint.

Do not drop the camera or subject it to physical shocks.

It can cause malfunctions to occur.

Never keep the camera face to strong light directly.

It can damage the CCD.

Do not expose the camera to rain or spill beverage on it.

If it gets wet, wipe it dry immediately. Liquids can contain minerals that corrode the electronic components.

Do not expose the camera to radioactivity.

If it is exposed to radioactivity, For heated CCD, it will be out of order.

■ Contents

1. Features

■ 1/3" 520K/610K Sony Super-HAD CCD II

Minimum Low Illumination (F1.2, 50 IRE)

■ High Resolution 680 TV Lines

This camera has realized high resolution of **680** TV lines using the top-notch full digital image processing, 10 Bit A/D serial signal processing and special algorithm technologies.

■ DNR(Digital Noise Reduction)

The DNR technology removes low-light gain noise and afterimage to provide distinct and clear images even in dark environments.

■ DAY&NIGHT

This camera has the Day/Night function which outputs the filter changing signal with detecting the illumination condition.

DayNight operation features an 'auto' mode which automatically switches between day and night mode based on the level of illumination on the scene.

The EXT mode changes between day and night operation upon triggering from an external source. The DAY mode operates in daytime conditions to provide optimum colors, and the NIGHT mode operates in night-time conditions to enhance the definition of the image.

■ SMART IR

This camera supports SMART IR function which automatically adjust the infrared light required in a scene as the subject moves closer to or further away from the camera, resulting in a clear image that is not washed out or too dark.

■ DEFOG

This camera supports DEFOG function which does a process of clearing blurred image caused by fog and snow by analyzing the brightness of input image and compensating the color of the image.

■ OSD(On Screen Display)

This camera supports the OSD function which is used to control the camera with multi languages. The camera can be controlled by selecting text displayed on the monitor screen.

■ CCVC(Camera Control Via Coaxial cable)

This is a remote control function that overlaps the coaxial cable (for a transfer of the video signal) with the control signal. In installation or repair, this helps you control the communication controller(optional) without additional cabling.

2. Cable Connection & OSD Control

1) Cable Connection
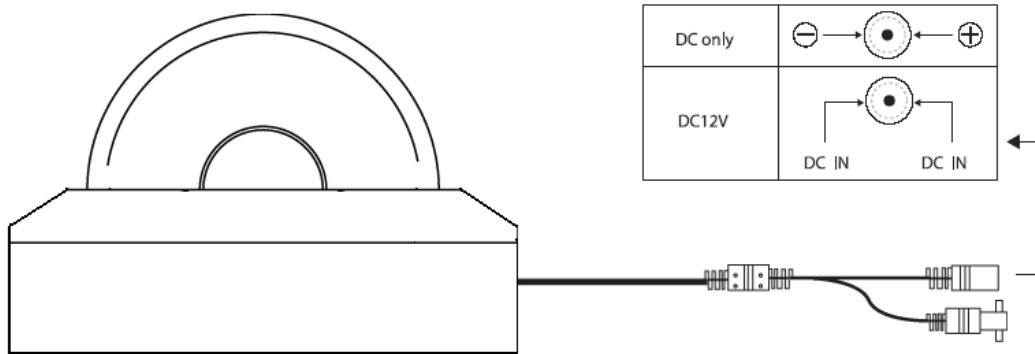
2) OSD Control
① **3AXIS BRACKET**
    -   Please loosen screws and fix tilted and panned position.
③ **LENS : Vari-Focal Auto Iris Lens**
③ **OSD PCB**
    -   **SETUP button** : Used for the menu display. This button can be used to confirm
        settings after changing the value of the selected function or current conditions.
    -   **UP & DOWN buttons** : Used for selecting items by moving the cursor up or down
        on the menu screen.
    -   **LEFT & RIGHT buttons** : Used when changing item values, by moving the cursor
        to the left or right on the menu screen

3. Setup Menu Operation

◆ **Menu configuration**

CAMERA SET	CAMERA TITLE	CAM ID	ID DISP
	FONT COLOR	COMMUNICATION	LANGUAGE
	VERSION		
EXPOSURE	LENS	BRIGHTNESS	SHUTTER
	FLK	AGC	
DAY/NIGHT	AUTO	NIGHT	DAY
	EXT.		
WHITE BAL.	ATW	MANUAL	PUSH
MONITOR	GAMMA	CHROMA	SHARPNESS
	SHADING	PED. LV.	
IMAGE	BLACKLIGHT	CONTRAST	POSI/NEGA
	H-MIRROR	PRIVACY	
DNR	LOW	HIGH	MIDDLE
	OFF		
MOTION	SENSITIVITY	AREA NO.	AREA USE
	TOP	BOTTOM	LEFT
	RIGHT		
EXIT	SAVE	INITIAL	RESTORE

Please press the SETUP button, Settings can now be made. The SETUP menu is displayed on the monitor. Please select any function you wish to activate by using the UP and DOWN buttons. The arrow can be moved up or down by using the UP and DOWN buttons. Please position the arrow to point to the function you wish to operate.
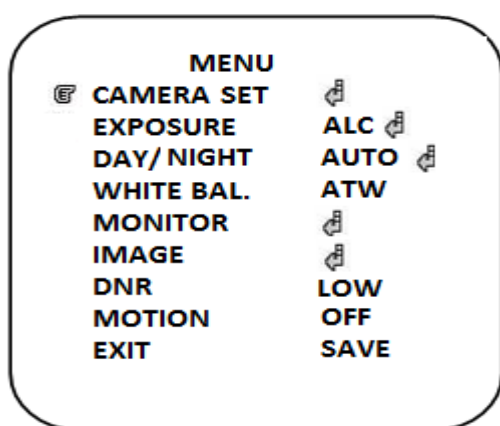
◆ **CAMERA SET**

You can set cam title, cam ID, Line Lock, Font Color, Communication, Language, version
This function can adjust the intensity of radiation incoming to the camera.
Use the "▲" "◀" "▶" "ⓔ" switch to select a menu item.

```
           CAMERA SET

  CAMERA TITLE      ON
  CAM ID            1    [      ]
  ID DISP.          OFF
  FONT COLOR        6    [███   ]
  COMMUNICATION
  LANGUAGE          ENG
  VERSION           1ATNIA
  RETURN
```

■ **CAM TITLE**

Make a set camera title using below numbers and alphabets

(0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G,H,I,J,K,L, M,N,O,P,Q,R,S,T,U,V,W,X,Y, Z)

◇**OFF**: disable CAMERA TITLE.

◇**ON**: display CAMERA TITLE.

```
          CAM TITLE

              ⇩

         ------------

    ⬆ , ⬇ = CHAR SELECT
    ⬅ , ➡ = POSITION
   ENTER  = RETURN
```

■ **CAM ID**

You can set CAMERA number from 1 to 255.

■ **ID DISP**

◇**OFF**: disable CAMERA NO/ID.

◇**ON**: display CAMERA NO/ID

■ **FONT COLOR**

You can set CAMERA OSD Color.

(white, cyan, green, magenta, red, blue, yellow, gray)

■ **COMMUNICATION (COAXIAL)**

This camera can be adjust by remote controller via coaxial.

You can select the Protocol as 15BIT, 32BIT.

■ **LANGUAGE**

You can set language.

(English, Chinese, Korean, Japanese, French, Deutsch, Italian, Spanish, Russian)

■ **VERSION**

Version of the camera will be display on the monitor.

◆ **EXPOSURE**

■ **ALC (Automatic Light Control)**

```
           MENU
   CAMERA SET
 🖱 EXPOSURE       ALC
   DAY/ NIGHT     AUTO
   WHITE BAL.     ATW
   MONITOR
   IMAGE
   DNR            LOW
   MOTION         OFF
   EXIT           SAVE
```

```
          EXPOSURE

  LENS           ALC
  BRIGHTNESS     8   [███  ]
  SHUTTER        1/ 60
  FLK            OFF
  AGC            20  [█████]
  RETURN
```

◇ **BRIGHTNESS(1~20)**

The **BRIGHTNESS** menu is used to adjust the overall brightness, where "▶" will increase the brightness and "◀" will decrease it.

◇ **SHUTTER**

The **SHUTTER** menu is used to set the fixed high-speed electronic shutter, auto high speed electronic shutter.

You can select one of 13 options from 1/100(PAL:1/120) for the fixed high speed electronic shutter, which is mostly used for imaging a fast moving object.

You can select one of shutter speed, 1/120(1/100), 1/250, 1/500, 1/700, 1/1K, 1/1.6K, 1/2.5K, 1/5K, 1/7K, 1/10K, 1/30K, 1/60K, 1/120K.
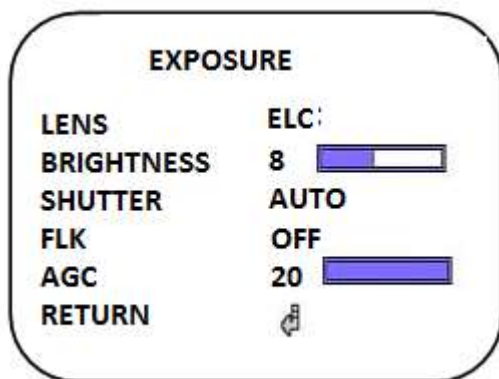
◇ **FLK (FLICKER LESS)**

If set to ON, the shutter speed will be fixed to 1/100(PAL:1/120) second.

This will prevent possible screen distortion to a mismatch between the vertical sync frequency and the blinking frequency of the lighting.

◇ **AGC(Automatic Gain Control) LEVEL : AGC max level from 0 to 20.(6dB to 40dB)**

The **AGC LEVEL** menu is used to adjust the overall AGC max level, where "▶" will increase the AGC max level and "◀" will decrease it.

■ **ELC(Electronic Light Control)**

```
        EXPOSURE

LENS           ELC:
BRIGHTNESS     8    �as
SHUTTER        AUTO
FLK            OFF
AGC            20
RETURN         ↵
```

◇ **BRIGHTNESS**

The **BRIGHTNESS** menu is used to adjust the overall brightness, where "▶" will increase the brightness and "◀" will decrease it.

◇ **SHUTTER**

The **SHUTTER** menu is used to set the fixed high-speed electronic shutter, auto high speed electronic shutter. You can select one of 13 options from 1/100(PAL:1/120) for the fixed high speed electronic shutter, which is mostly used for imaging a fast moving object.

You can select one of shutter speed, 1/120(1/100), 1/250, 1/500, 1/700, 1/1K, 1/1.6K, 1/2.5K, 1/5K, 1/7K, 1/10K, 1/30K, 1/60K, 1/120K.
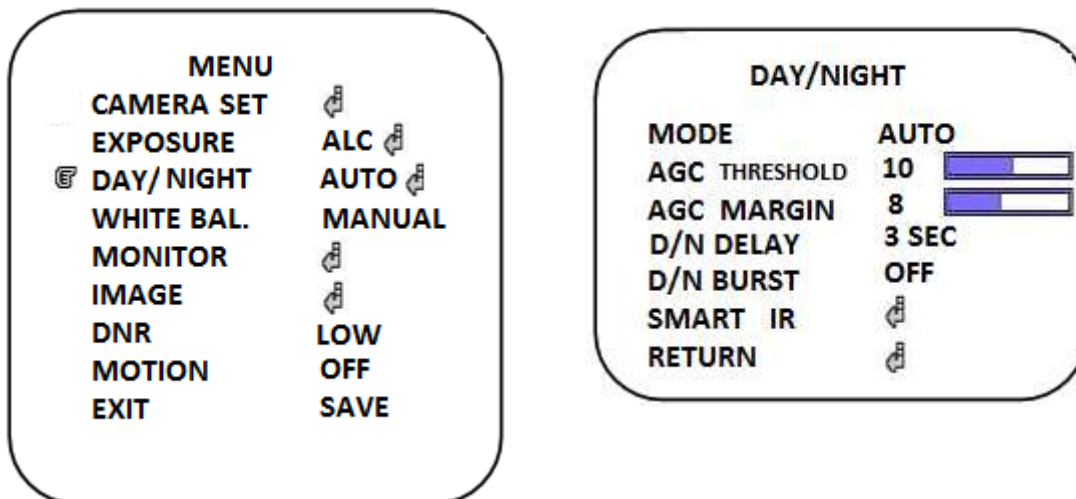
◇ **FLK(FLICKER LESS)**

If set to ON, the shutter speed will be fixed to 1/100(PAL:1/120) second. This will prevent possible screen distortion to a mismatch between the vertical sync frequency and the blinking frequency of the lighting.

◇ **AGC(Automatic Gain Control) LEVEL : AGC max level from 0 to 20.(6dB to 40dB)**

The **AGC LEVEL** menu is used to adjust the overall AGC max level, where "▶" will increase the AGC max level and "◀" will decrease it.

◆ DAY/NIGHT(AUTO, DAY, NIGHT, EXT)

■ AUTO

```
        MENU
   CAMERA SET      ↵
   EXPOSURE       ALC ↵
☞  DAY/ NIGHT     AUTO ↵
   WHITE BAL.     MANUAL
   MONITOR         ↵
   IMAGE           ↵
   DNR            LOW
   MOTION         OFF
   EXIT           SAVE
```

```
       DAY/NIGHT
   MODE           AUTO
   AGC THRESHOLD  10  �▨▨▨
   AGC MARGIN     8   ▨▨▨
   D/N DELAY      3 SEC
   D/N BURST      OFF
   SMART IR        ↵
   RETURN          ↵
```

The camera will automatically switch between DAY and NIGHT mode, according to the lighting condition. If you press the ⓔ**(Enter)** switch with an **AUTO** based sub menu selected, you will see the appropriate screen.

◇ **AGC THRESHOLD**

Set AGC THRESHOLD that is standard value of the AGC gain, when changing from DAY to NIGHT or from NIGHT to DAY.

◇ **AGC MARGIN:** Set AGC MARGIN.

◇ **DAY & NIGHT DELAY TIME:** Set day/night switching delay time.

◇ **SMART IR**

Set SMART IR function as ON or OFF. If set to on, the brightness of IR and saturation phenomenon is automatically adjusted.
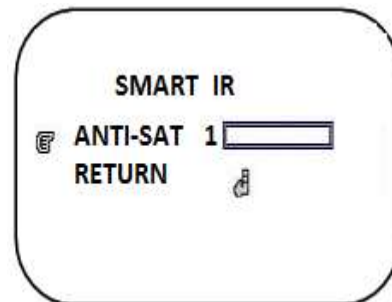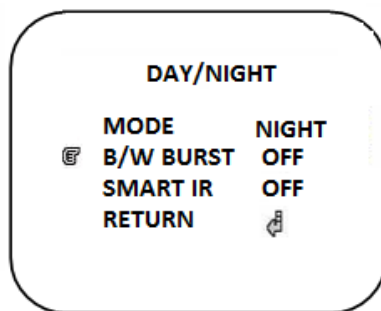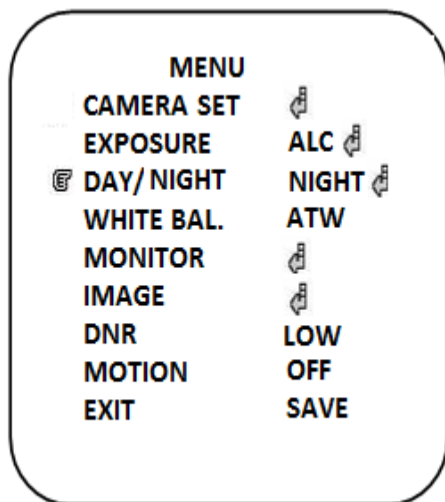
■ DAY

```
        MENU
   CAMERA SET      ↵
   EXPOSURE       ALC ↵
☞  DAY/ NIGHT     DAY  ↵
   WHITE BAL.     ATW
   MONITOR         ↵
   IMAGE           ↵
   DNR            LOW
   MOTION         OFF
   EXIT           SAVE
```
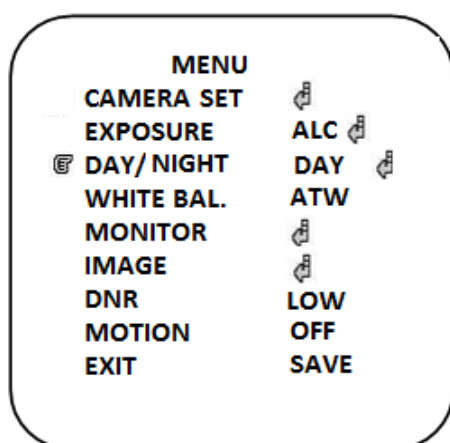
If set to **COLOR** mode, it will be fixed to **COLOR** mode regardless of the ambient conditions.
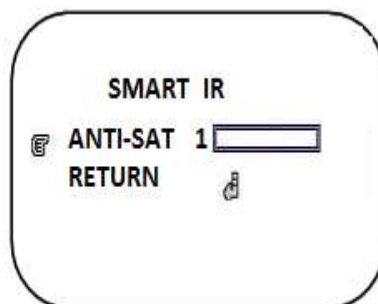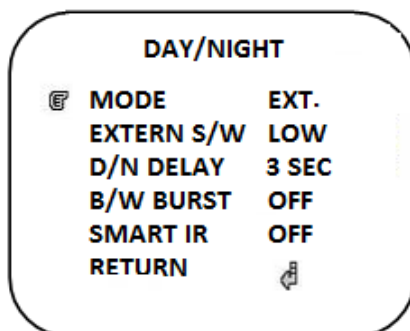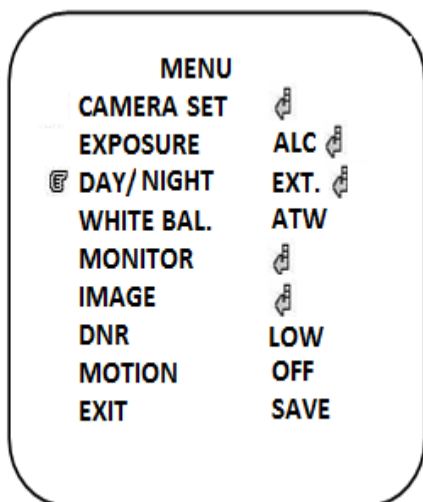
■ NIGHT

If set to **NIGHR** mode, it will be fixed to black-and-white mode regardless of ambient conditions. If you press ⓔ**(Enter)** switch with a **NIGHT** sub menu selected, you will see a menu where you can select set BURST ON or OFF.

```
        MENU
CAMERA SET      🖰
EXPOSURE        ALC 🖰
🖰 DAY/ NIGHT    NIGHT 🖰
WHITE BAL.      ATW
MONITOR         🖰
IMAGE           🖰
DNR             LOW
MOTION          OFF
EXIT            SAVE
```

```
      DAY/NIGHT
    MODE      NIGHT
🖰  B/W BURST  OFF
    SMART IR   OFF
    RETURN     🖰
```

```
     SMART IR
🖰 ANTI-SAT  1▭
   RETURN    🖰
```

■EXT.

This enables to switch between DAY and NIGHT mode using the interface with external signal.

```
        MENU
CAMERA SET      🖰
EXPOSURE        ALC 🖰
🖰 DAY/ NIGHT    EXT. 🖰
WHITE BAL.      ATW
MONITOR         🖰
IMAGE           🖰
DNR             LOW
MOTION          OFF
EXIT            SAVE
```

```
      DAY/NIGHT
🖰  MODE       EXT.
    EXTERN S/W  LOW
    D/N DELAY   3 SEC
    B/W BURST   OFF
    SMART IR    OFF
    RETURN      🖰
```

```
     SMART IR
🖰 ANTI-SAT  1▭
   RETURN    🖰
```

◆ WHITE BAL.(White Balance)

Use the White Balance function to adjust the screen color.

```
        MENU
CAMERA SET      🖰
EXPOSURE        ALC 🖰
DAY/ NIGHT      EXT. 🖰
🖰 WHITE BAL.    ATW
MONITOR         🖰
IMAGE           🖰
DNR             LOW
MOTION          OFF
EXIT            SAVE
```
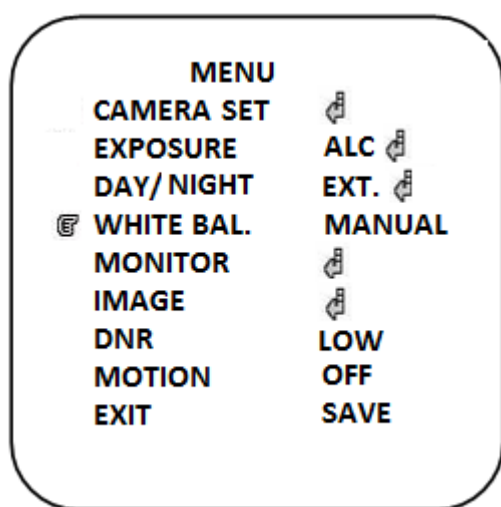
◇ ATW

The camera can automatically adjust the color temperature in real time, according to the ambient conditions. The color temperature ranges from 2,000K ~ 10,000K.

```
        MENU
CAMERA SET      ⏏
EXPOSURE        ALC ⏏
DAY/ NIGHT      EXT. ⏏
☞ WHITE BAL.    PUSH
MONITOR         ⏏
IMAGE           ⏏
DNR             LOW
MOTION          OFF
EXIT            SAVE
```
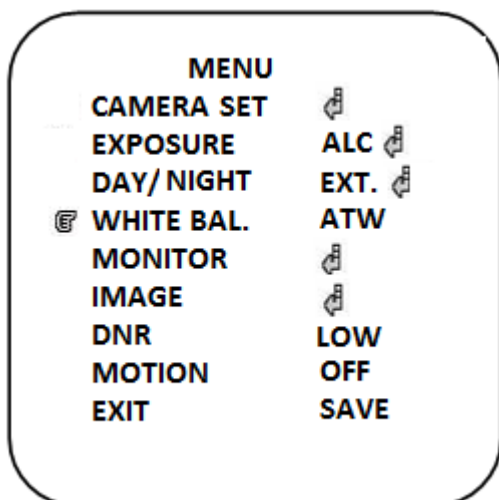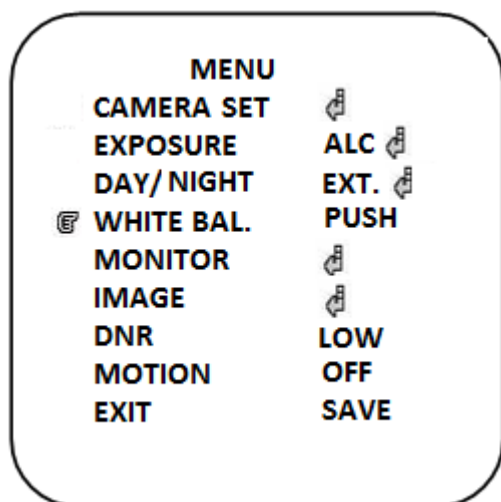
◇ **PUSH**

If you press the ⓔ**(Enter)** switch in the appropriate item position, Auto White Balance will perform once.

```
        MENU
CAMERA SET      ⏏
EXPOSURE        ALC ⏏
DAY/ NIGHT      EXT. ⏏
☞ WHITE BAL.    MANUAL
MONITOR         ⏏
IMAGE           ⏏
DNR             LOW
MOTION          OFF
EXIT            SAVE
```

◇ **MANUAL**

In this mode, you can set the color temperature of RED and BLUE.

```
      W.B. MANUAL

☞ RED        9
  BLUE       11
  RETURN     ⏏
```
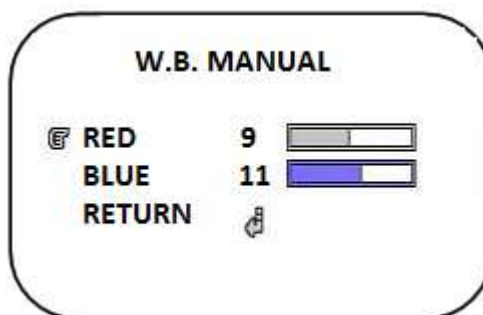
◆ **MONITOR**

Please change the settings value of video appropriate to your monitor.

```
        MENU
CAMERA SET      ⏏
EXPOSURE        ALC ⏏
DAY/ NIGHT      EXT. ⏏
WHITE BAL.      MANUAL
☞ MONITOR       ⏏
IMAGE           ⏏
DNR             LOW
MOTION          OFF
EXIT            SAVE
```

```
        MONITOR

GAMMA        0.45
CHROMA       15
SHARPNESS    10
SHADING      0
PED. LV.     8
RETURN       ⏏
```
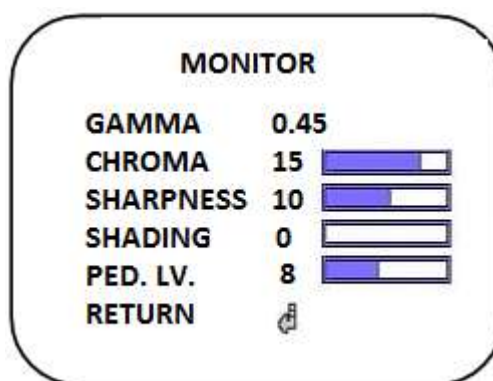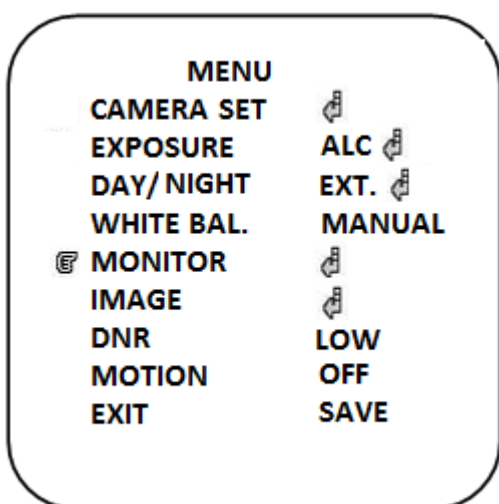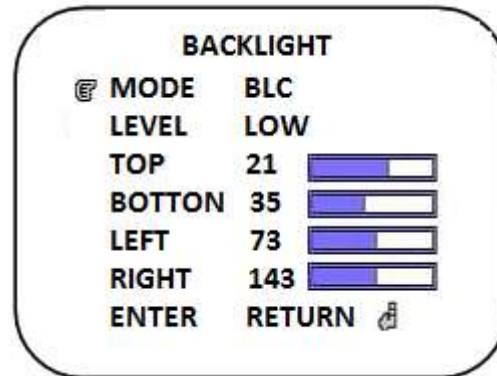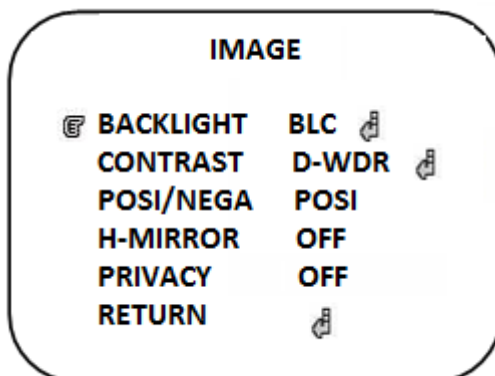
◇ **GAMMA**

0.4,0.45,0.5,0.55,0.6,0.65

◇ **CHROMA:** Color Gain Set

◇ **SHARPNESS:** Aperture (Horizontal,Vertical) Set

◇ **SHADING:** Lens Shading
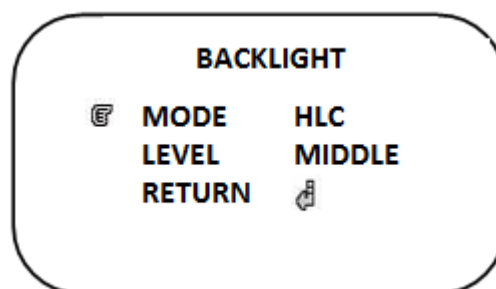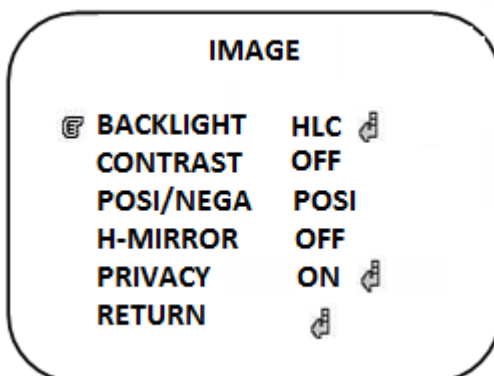
◇ **PED. LV.:**Pedestal Level Set

◆ **IMAGE**

```
                  MENU
          CAMERA SET      
          EXPOSURE       ALC
          DAY/ NIGHT     EXT.
          WHITE BAL.     MANUAL
          MONITOR        
        ☞ IMAGE          
          DNR            LOW
          MOTION         OFF
          EXIT           SAVE
```
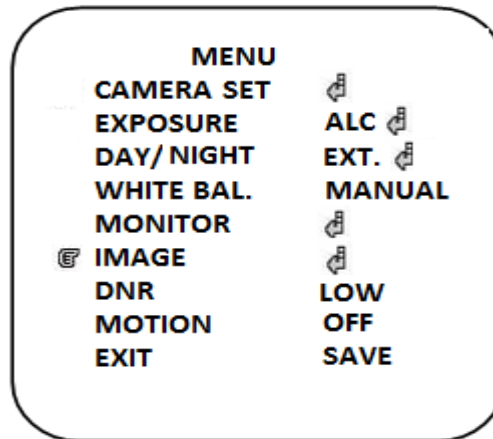
■ **BACK LIGHT**

◇ **BLC**

Adjusts the area to be enhanced and sets the level.

```
          IMAGE                              BACKLIGHT

   ☞ BACKLIGHT   BLC            ☞ MODE      BLC
     CONTRAST    D-WDR            LEVEL     LOW
     POSI/NEGA   POSI             TOP       21  ▆▆▆▆□
     H-MIRROR    OFF              BOTTON    35  ▆▆□□□
     PRIVACY     OFF              LEFT      73  ▆▆▆□□
     RETURN                       RIGHT     143 ▆▆▆□□
                                  ENTER     RETURN
```

◇ **HLC**

If the scene contains extremely bright light areas such as; from car headlight, the light can mask out much of the on-screen detail.
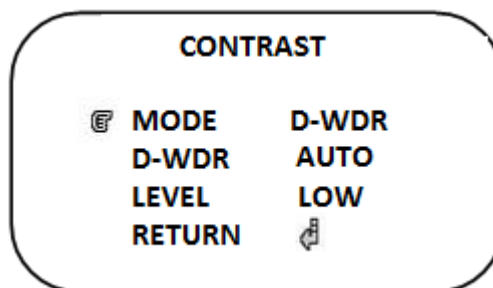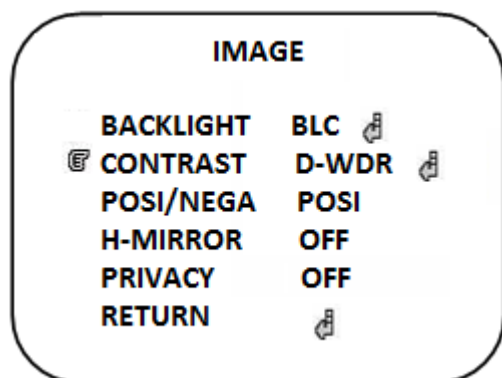
- LEVEL: Adjusts the brightness level of a monitoring area.

```
          IMAGE                              BACKLIGHT

   ☞ BACKLIGHT   HLC            ☞ MODE      HLC
     CONTRAST    OFF              LEVEL     MIDDLE
     POSI/NEGA   POSI            RETURN
     H-MIRROR    OFF
     PRIVACY     ON
     RETURN
```
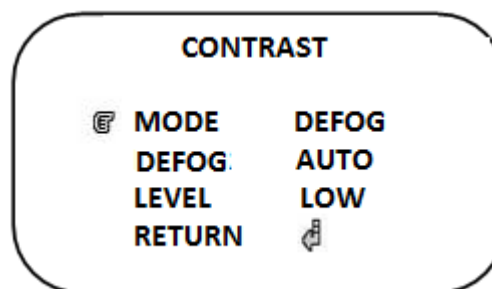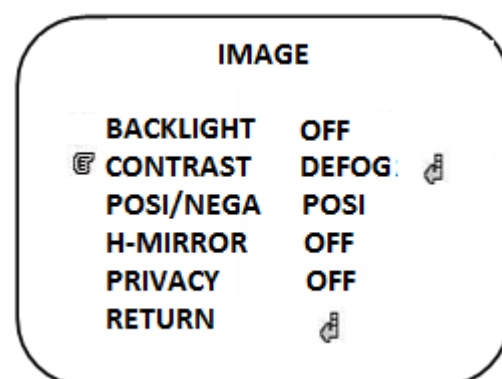
■ CONTRAST

◇ D-WDR

When there are both bright and dark areas at the same time, this mode makes both areas distinctive.
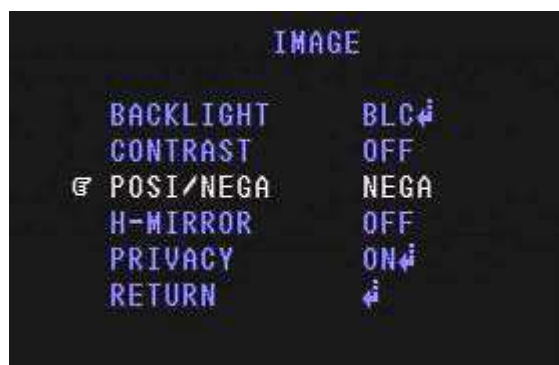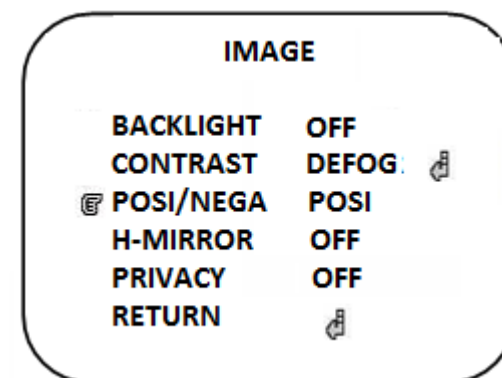

◇ DEFOG

This camera supports DEFOG function which does a process of clearing blurred image caused by fog and snow by analyzing the brightness of input image and compensating the color of the image

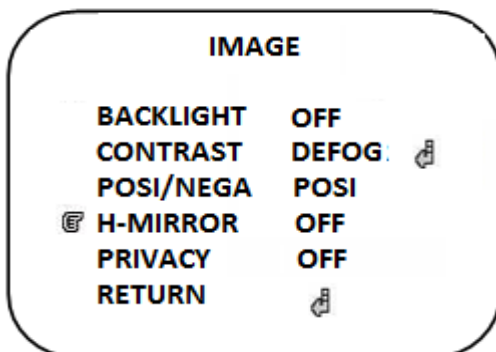### ◇ POSI / NEGA

Switch to negative color.
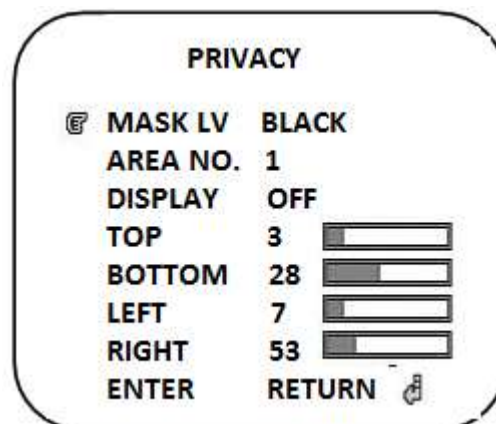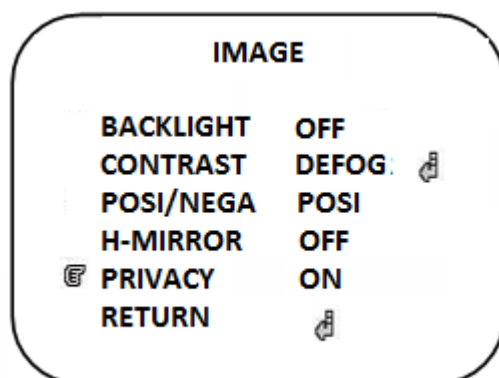
■ **H - MIRROR**

◇ **H – MIRROR**

You can flip the picture
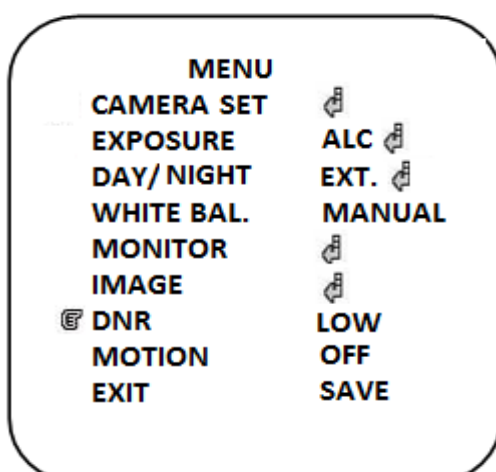
   - MIRROR: Horizontal reverse pictures on the monitor.

```
          IMAGE

    BACKLIGHT    OFF
    CONTRAST     DEFOG.
    POSI/NEGA    POSI
 ☞ H-MIRROR     OFF
    PRIVACY      OFF
    RETURN
```

◇ **PRIVACY**

You may conceal specific area on the screen with this 'PRIVACY' function.

You can set masking areas up to 8 zones.

```
          IMAGE                          PRIVACY

    BACKLIGHT    OFF              ☞ MASK LV   BLACK
    CONTRAST     DEFOG.             AREA NO.  1
    POSI/NEGA    POSI               DISPLAY   OFF
    H-MIRROR     OFF                TOP       3
 ☞ PRIVACY      ON                 BOTTOM    28
    RETURN                         LEFT      7
                                   RIGHT     53
                                   ENTER     RETURN
```

◆ **DNR(Digital Noise Reduction): OFF, LOW, MIDDLE, HIGH**

```
          MENU
    CAMERA SET
    EXPOSURE     ALC
    DAY/ NIGHT   EXT.
    WHITE BAL.   MANUAL
    MONITOR
    IMAGE
 ☞ DNR          LOW
    MOTION       OFF
    EXIT         SAVE
```
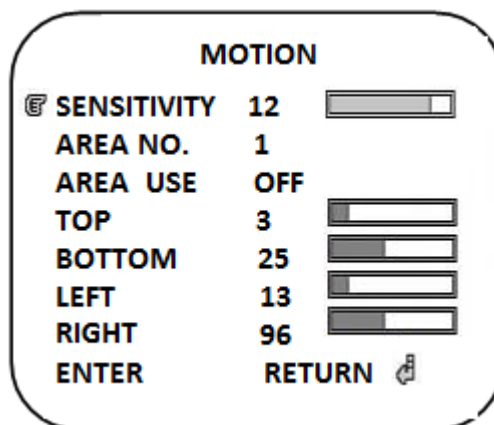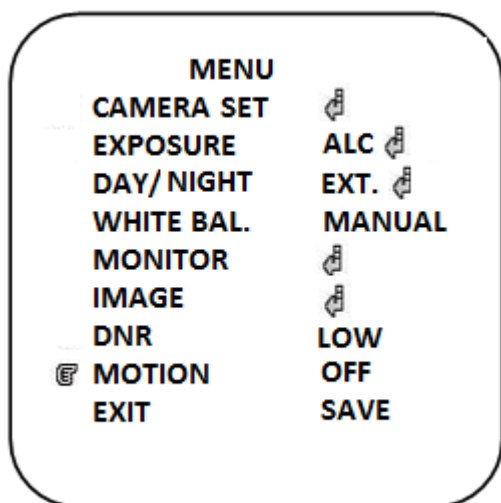
You can configure the DNR(Digital Noise Reduction) related settings. It reduces the noise on the screen. This is especially useful for a severely distorted screen

◆ **MOTION**

You can specify a detection area. Select area number and specify the sensitivity and size.

```
        MENU                            MOTION
  CAMERA SET    ⮌              SENSITIVITY   12   [====___]
  EXPOSURE      ALC ⮌          AREA NO.      1
  DAY/ NIGHT    EXT. ⮌         AREA  USE     OFF
  WHITE BAL.    MANUAL         TOP           3    [=_____]
  MONITOR       ⮌              BOTTOM        25   [====__]
  IMAGE         ⮌              LEFT          13   [==____]
  DNR           LOW            RIGHT         96   [====__]
  MOTION        OFF            ENTER            RETURN ⮌
  EXIT          SAVE
```

◇ **SENSITIVITY**

Set the sensitivity of the motion detection from 0(Highest) to 15(Lowest).

◇ **AREA NO**

Specify a detection area. You can set the area from 1 to 4.
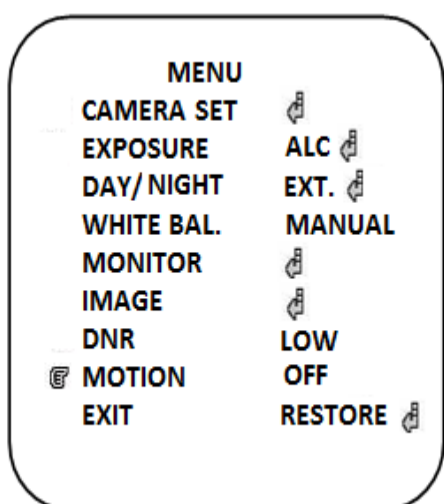
◇ **AREA USE**

With the DISPLAY option set to ON, a motion function will be displayed on the screen, if detected.

◇ **TOP/ BOTTOM/LEFT/ RIGHT**

-. **TOP**: extends or reduces upper detection area.

-. **BOTTOM**: extends or reduces lower detection area.

-. **LEF**: extends or reduces detection area on the left.

-. **RIGHT**: extends or reduces detection area on the right

◆ **EXIT**

Select a desired EXIT mode using the switch depending on the camera purpose

```
        MENU                       MENU                        MENU
  CAMERA SET    ⮌          CAMERA SET    ⮌           CAMERA SET    ⮌
  EXPOSURE      ALC ⮌      EXPOSURE      ALC ⮌       EXPOSURE      ALC ⮌
  DAY/ NIGHT    EXT. ⮌     DAY/ NIGHT    EXT. ⮌      DAY/ NIGHT    EXT. ⮌
  WHITE BAL.    MANUAL     WHITE BAL.    MANUAL      WHITE BAL.    MANUAL
  MONITOR       ⮌          MONITOR       ⮌           MONITOR       ⮌
  IMAGE         ⮌          IMAGE         ⮌           IMAGE         ⮌
  DNR           LOW        DNR           LOW         DNR           LOW
  MOTION        OFF        MOTION        OFF         MOTION        OFF
  EXIT          RESTORE ⮌  EXIT          SAVE ⮌      EXIT          INITIAL ⮌
```
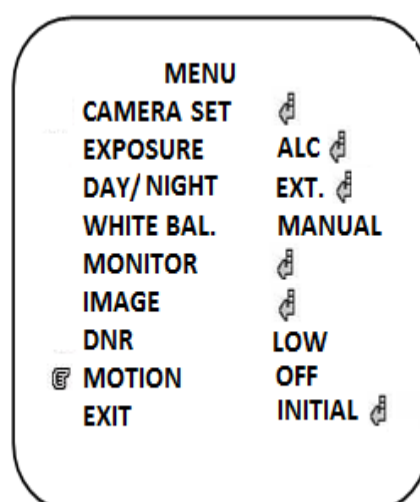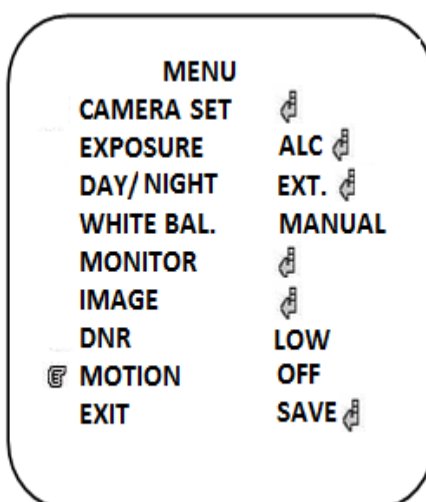
◇ **RESTORE:** not saves the current settings.

◇ **INITIAL: reset the camera settings**

◇ **SAVE:** save the current settings
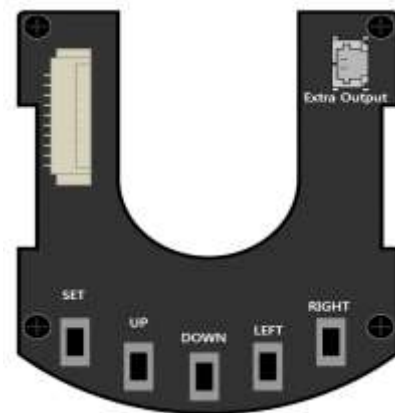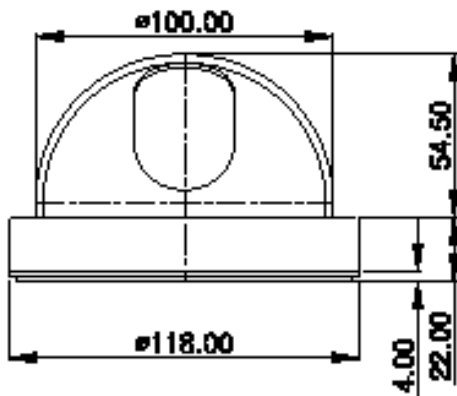
4. Troubleshooting

If there are problems in operation, please refer to the items below. If the problem persists, please contact the agent you purchased this product from.

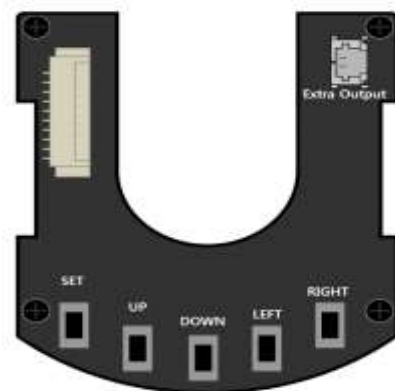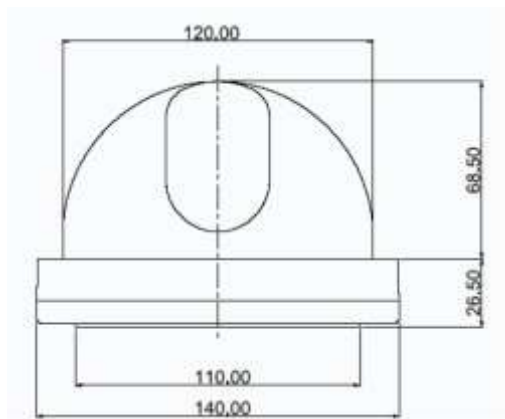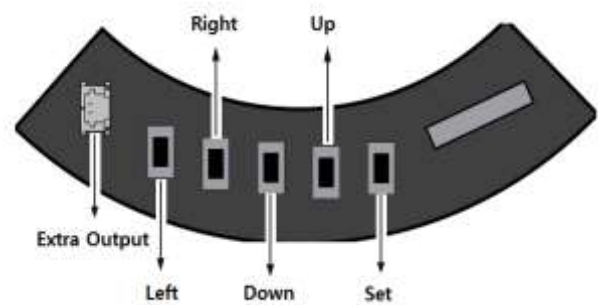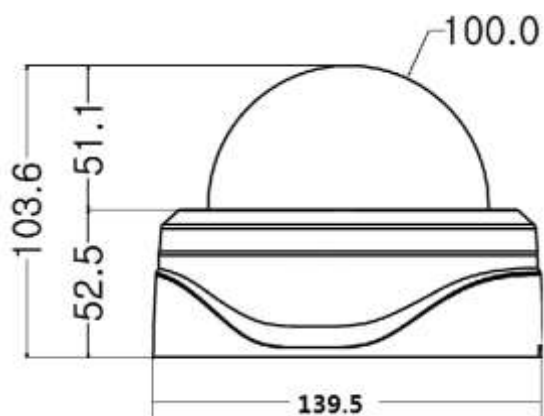| Problems	Troubleshooting
Nothing appears on the screen.	• Please check the power connection. • Please check the video signal line connection. • Please check and make sure that the auto lens switch is set to DC (VIDEO) when using a VIDEO(DC) lens.
The video image is not clear.	• Please check if the lens is clean. Please clean the lens with a clean cloth or brush. • Please adjust the contrast feature of the monitor. • Please readjust the back focus of the camera.
The screen is dark.	• Please adjust the contrast feature of the monitor. • If you have an intermediate device, set the 75 / Hi-z properly, and check the terminals. • Please check if an auto iris lens is being used and adjust the brightness level.
There is a problem with the camera operation.	• Please check if an appropriate power source to the camera complies with the manufacturer's standard requirement, or if the voltage keeps changing.
The MOTION DETECTION function is not working.	• Please check if 'MOTION DETECTION' mode is turned on. • Please check if the MD LEVEL is too low. • Please check the setting of the MD AREA.
Colors are not quite right.	• Please check the 'WHITE BAL' setting
The screen is flickering.	• Please check if the camera is facing directly into sunlight or fluorescent light. • Please check if an auto iris lens is being used. • Please check the connection of the lens connector cable.
COLOR mode is not working.	• Please check if the AGC menu is set to the OFF position.
SENS-UP function is not working.	• Please check if the AGC menu is set to the OFF position. • Please check if the SHUTTER menu is set to MANUAL mode.

5. Dimensions

DOME CAMERA

N1

N2

N3

N4

ø 81
87
45
13
ø 112

VANDAL DOME CAMERA

N5

100.0
ø 145.0

UP
Right
Left
Down
Extra Output

N6

Ø 100.0
107.7
57.2
132.0
144.4

Right
Down
Extra Output
Up
Left
Set
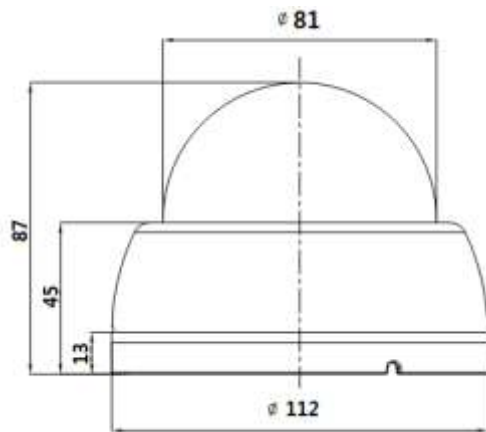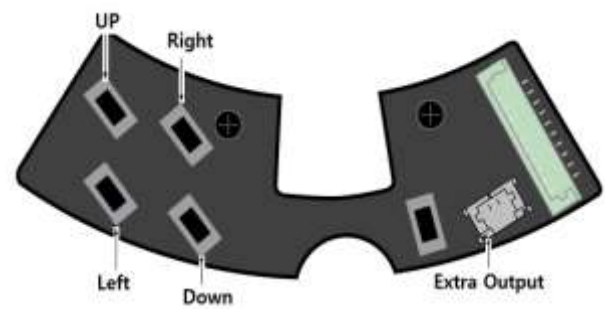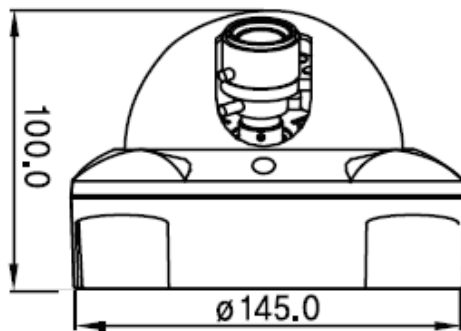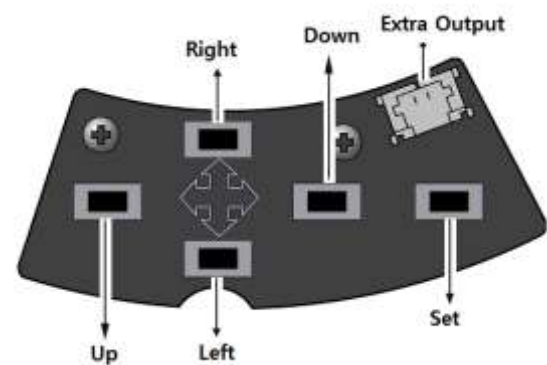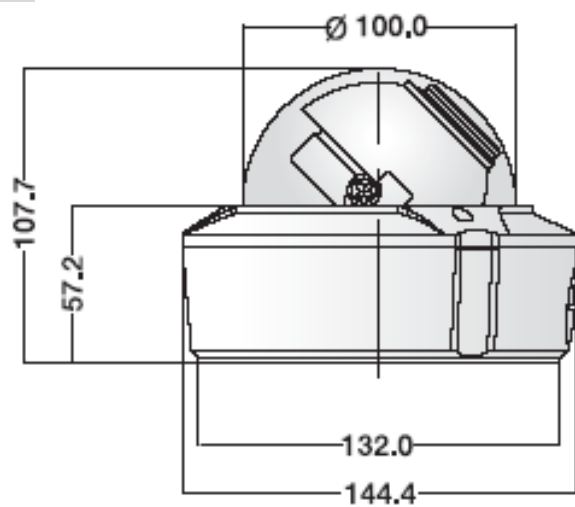
IR DOME CAMERA

N7
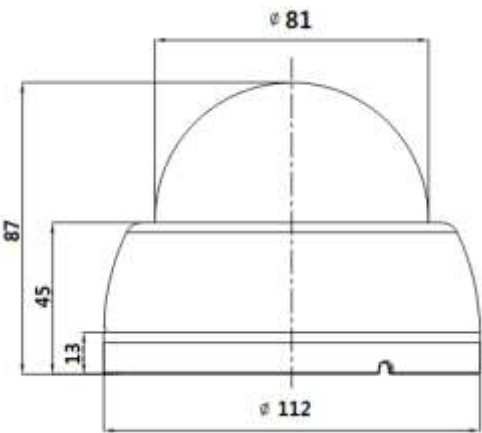
IR VANDAL DOME CAMERA

N8
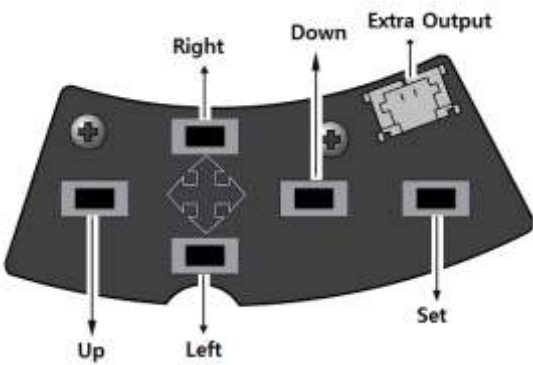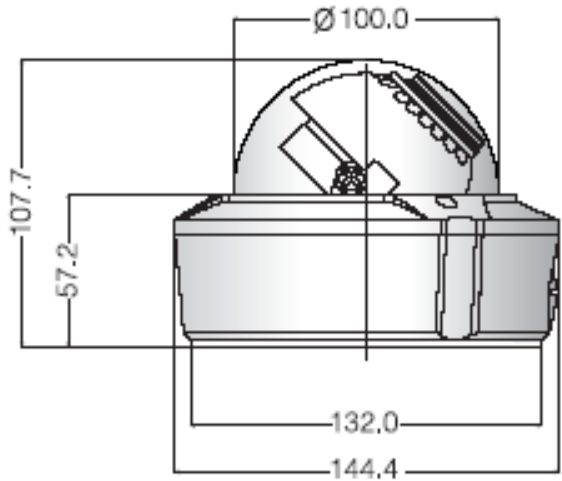
6. Specifications

▪ GENERAL

Signal system	NTSC	PAL
Image Sensor	1/3" 960H Super HAD Sony CCD Ⅱ	
Total Pixels	1028(H)X508(V)	1028(H)X596(V)
Effective Pixels	976(H)X494(V)	976(H)X582(V)
Resolution	680 TV lines (B/W 750 TV Lines with ICR)	
Scanning Frequency	15.734KHz(H), 60Hz(V)	15.625KHz(H), 50Hz(V)
Min. Illumination	0.08Lux(50IRE)	
Day & Night	Day / Night / Auto / EXT (Option: True Day & Night with ICR)	
OSD	English, Chinese, Korean, Japanese, French, Deutsch, Italian, Spanish, Russian	
White Balance	ATW / PUSH / MANUAL	
ATW	2000~10000K	
AGC	Level setting	
BackLight	BLC / D-WDR / HLC	
DNR	Off / 2D	
Privacy Zone / Motion	8 Areas / 4 Areas	
Camera ID	OFF / ON	
Defog	OFF / ON	
UTC(CCVC)	Avaible	
S/N Ratio	More than 52dB	
Day & Night	Day / Night / Auto / EXT (Option: True Day & Night with ICR)	
Video Output	Composite video output 75 ohm terminated	
Lens	3.6 mm Fixed Lens	
	2.8~12mm Auto Iris Lens (ICR: Option)	
	9~22mm Auto Iris Lens	
	4~9mm Auto Iris Lens	
	mm	
Sync. System	Internal	
Operating Humidity	30 % ~ 90 % RH	
Operating Temp.	- 10°C to 50°	

Dome type

Number	1	2	3	4
Install Type	Indoor	Indoor	Indoor	Indoor
Dimension(mm)	φ100x76.5(H)	φ120x95(H)	φ100x103(H)	φ81x87(H)
3 Axis	2 Axis	2 Axis	3Axis	3Axis
Material	Plastic Body & Bubble	Plastic Body & Bubble	PC Bubble & Plastic Body	PC Bubble & Plastic Body
Weight	300g	560g	600g	300g
Power Consumption	Max 1.8W	Max 2.5W	Max 2.5W	Max 2.5W
Power Supply	DC12V (10.2V~14.5 V)	DC 12 V 500mA(10.2V~14.5 V) Dual Voltage(Option) : AC24V / DC12V		

Vandal dome type · IR Dome · IR Vandal Dome

Number	5	6	7	8
LED	x	x	24LEDs(750nm)	30LEDs(750nm)
Visibility Range	x	x	15m	30m
Install Type	Outdoor/Indoor	Outdoor/Indoor	Indoor	Outdoor/Indoor
Dimension(mm)	φ100 x 145(H)	φ100 x 144.4(H)	φ81x87(H)	φ100 x 144.4(H)
3 Axis	3 Axis	3Axis	3 Axis	3 Axis
Material	Aluminum Body & PC Bubble	Aluminum Body & PC Bubble	PC Bubble & Plastic Body	Aluminum Body & PC Bubble
Weight	560g	600g	350g	650g
Power Consumption	Max 2.5W	Max 2.5W	Max3.2W	Max3.5W
Power Supply	DC 12 V (10.2V~14.5 V) Dual Voltage(Option) : AC24V / DC12V			